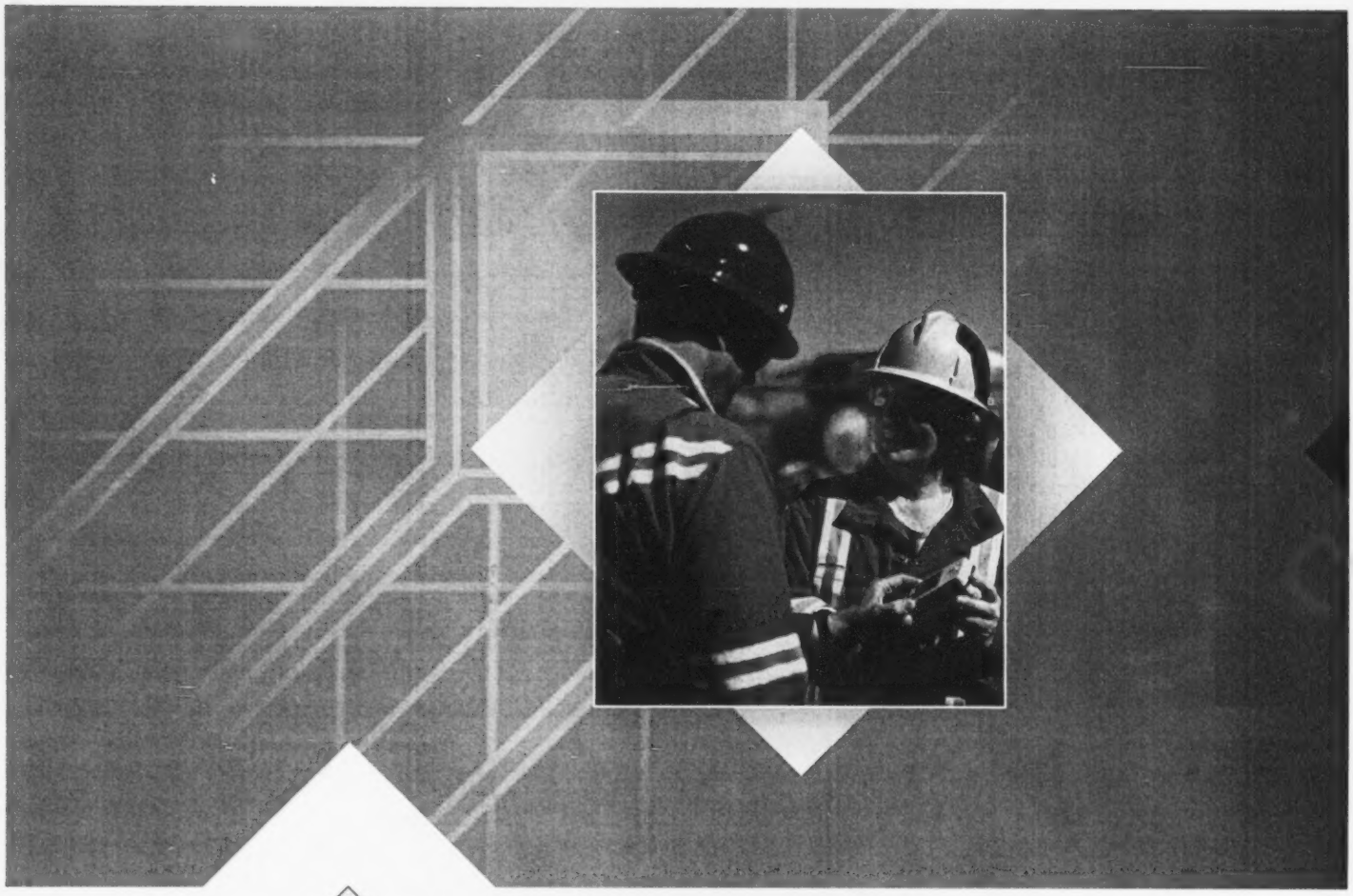
A Workforce Strategy for Alberta's Energy Sector



Building and Educating
Tomorrow's Workforce
Alberta's 10 Year Strategy

FOREWORD

A Workforce Strategy for Alberta's Energy Sector was prepared by energy sector representatives and government to develop the strong, skilled labour force required by Alberta's energy sector. The Alberta Chamber of Resources and the Construction Owners Association of Alberta played key leadership roles in bringing stakeholders together to participate in these discussions which occurred between October 2006 and February 2007. Industry associations and companies have identified actions they support and to which they will contribute with related projects/initiatives.

The following organizations contributed to the development of this workforce strategy:

- Alberta Building Trades Council
- Alberta Chamber of Resources
- Alberta Forest Products Association
- Albian Sands Energy Inc.
- Association of Professional Engineers, Geologists and Geophysicists of Alberta
- Canadian Association of Petroleum Producers
- Canadian Natural Resources Ltd.
- Coal Association of Canada
- Construction Labour Relations of Alberta
- Construction Owners Association of Alberta
- Construction Sector Council of Canada
- Devon Canada Corporation
- Dynatec Corporation
- Electricity Sector Council
- Elk Valley Coal Corporation
- Enbridge Pipelines Inc.
- EnCana Corporation
- Enform Canada
- EPCOR Utilities
- Horizon Construction Management Ltd.
- Harvest Energy Trust

- Keyano College Foundation
- Ledcor Industrial Limited
- Mackenzie Aboriginal Corp.
- NewGen Synergistics Inc.
- Nexen Inc.
- Petro-Canada
- Petroleum Human Resources Council of Canada
- Petroleum Service Association of Canada
- SGS Canada Inc.
- Shell Canada Limited
- Statoil
- Suncor Energy
- Syncrude
- Synenco Energy
- The Focus Corporation
- TransAlta

BACKGROUND

Alberta is a leader in economic growth in Canada and the world. However, Alberta is faced with labour and skill shortages, which if not addressed, will constrain continued economic growth and prosperity.

Building and Educating Tomorrow's Workforce (BETW) is Alberta's 10 year labour force development strategy. This strategy identifies 17 government-led priority actions to ensure Alberta has more workers, better trained people and innovative workplaces. These government actions address labour force issues across several industry sectors.

Meeting Alberta's labour force challenges over the next decade requires the participation and involvement of all stakeholders. Government cannot do it alone. Stakeholders include industry, labour groups, professional organizations, volunteer and community agencies, education and training providers, and where appropriate, other orders of government. Each stakeholder has an important role to play. Strong collaboration and partnerships between government and various stakeholder groups is key to successful implementation of the workforce strategy.

INDUSTRY WORKFORCE STRATEGIES

While there are common labour force pressures across industry sectors in Alberta, some industries are feeling certain pressures more acutely than others. Actions are needed to address the unique labour force issues and challenges of each industry sector.

Industry stakeholders are working with the Alberta government to document existing initiatives and develop industry-specific workforce development strategies. These workforce strategies provide industry associations and individual employers with a framework of industry-led actions to build the labour force needed to support continued growth over the next 10 years. As circumstances and priorities shift, it can be expected that industry will revisit their workforce strategy to ensure its relevancy.

Industry is leading the implementation of workforce strategy actions. High levels of co-operation and collaboration within Alberta's energy sector are required for successful implementation of the workforce strategy. Creative solutions and a synergistic approach to implementing initiatives work best when stakeholders come together in partnership. Government assists in bringing stakeholders together, including those from other sectors, to work on common actions and initiatives.

Albertans are the long-term beneficiaries of this important collaboration to build Alberta's workforce over the next decade.

PROFILE OF ALBERTA'S ENERGY SECTOR

Sector Definition

Alberta's energy sector is a diverse and complex sector comprised of numerous sub-sectors. This complexity, along with the energy sector's interdependency with other sectors of the economy, makes it somewhat difficult to define. For the purposes of this workforce strategy, the sector has been defined broadly to include businesses involved in:[1]

- exploration and production of both conventional and non-conventional crude petroleum and natural gas, including oil sands and coal-bed methane;
- mining for coal[2];
- electric power generation transmission and distribution, and
- oil and gas pipelines.

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[1] The definition of the energy sector closely follows that used by Calgary Economic Development in their energy sector profile titled *Calgary: A Global Energy Centre.*

[2] This workforce strategy focuses on Alberta's energy minerals including oil, oil sands, natural gas and coal. Mining for non-energy minerals including sand and gravel, salt, silica, stone and gold is not included in this strategy. *Alberta Mineral Development Strategy, 2002*

The energy sector also provides support to, and is supported by, other important sectors of Alberta's economy primarily manufacturing, industrial construction and transportation. Achieving the planned growth in Alberta's energy sector will require addressing the labour force challenges and issues also faced by these sectors. A separate labour force development strategy is being developed for the construction sector. However, due to the significant number and size of planned energy-related construction projects over the next several years, the energy sector workforce strategy takes into account some of the labour force challenges and issues faced by businesses that construct, repair or renovate energy-related industrial infrastructure (i.e. upgraders, oil and gas pipelines, power plants, etc.). Separate workforce strategies are also being developed for the manufacturing and transportation sectors.

Importance to the Provincial Economy

Alberta's energy sector is described as the engine of the province's economy. In 2005, the energy sector, including mining, contributed over 28 per cent or $59 billion to Alberta's gross domestic product (GDP).[3]

Spurred by high levels of capital investment, the energy sector has been driving the strong growth in Alberta's economy in recent years. Annual capital spending in the oil and gas industry tripled from $11.5 billion in 1998 to $36.6 billion in 2006.[4] As of May 2007, there were $121.3 billion energy-related construction projects planned, underway or recently completed in the province.[5]

An economically healthy and vibrant energy sector has spin-off benefits for other sectors. The sizeable capital and operating expenditures of energy companies generates increased demand for goods and services. This creates employment in other sectors. For every job created in oil and gas extraction, more than four indirect and induced jobs are created in the provincial economy.[6]

Some of these jobs are created in the manufacturing, industrial construction and transportation sectors which share a close interdependent relationship with the energy sector. For example, chemical and petro-chemicals manufacturing, which accounted for 23 per cent of Alberta's manufacturing shipments in 2006, rely on outputs from Alberta's energy sector for their production processes. Other manufacturing sectors, such as metal fabrication and machinery, provide inputs to Alberta's energy sector. In the case of metal fabrication, for example, $2.4 billion (52 per cent) of total metal fabrication shipments in Alberta in 2006[7] were from metal fabrication sub-sectors that are dependent on Alberta's energy sector.[8]

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[3] Alberta Finance, 2006
[4] *Private and Public Investment in Canada Intentions 2007*, Statistics Canada
[5] *Inventory of Major Alberta Projects*, Alberta Employment, Immigration and Industry, May 2007
[6] *Alberta Economic Multipliers*, Alberta Finance, 2006
[7] Statistics Canada, 2006
[8] Sub-sectors include machine shops, boiler, tank and shipping container manufacturing, and other fabricated metal products, definition from Statistics Canada.

With regards to industrial construction, the $121.3 billion in energy-related construction projects mentioned earlier account for over 66 per cent of all major construction projects that are planned, underway or recently completed in the province.[9] The energy sector relies on the transportation sector for the movement of labour, equipment and materials.

Besides driving economic activity and generating jobs, the energy sector is also a major contributor to provincial government revenues. Non-renewable resource revenue accounted for approximately 40 per cent ($14.35 billion) of total revenue collected in 2006.[10]

Sub-Sectors

Alberta's energy sector, as defined for the purposes of this workforce strategy, encompasses a number of diverse sub-sectors:

- **Oil & Gas.** Alberta is the cornerstone of Canada's oil and gas industry, accounting for 73 per cent of the country's petroleum production, drilling and investment spending.[11] While production of conventional oil and gas has been declining, drilling activity has increased significantly in recent years as the industry continues to respond to a high price environment resulting from strong demand. Over 17,500 wells were drilled in Alberta in 2006, compared to 9,200 in 1999.[12] Gas well drilling has accounted for approximately 70 per cent of wells drilled in recent years, with increased interest in non-conventional natural gas resources such as natural gas in coal (i.e. coal bed methane), tight gas[13] and deep gas.[14] Increased drilling activity across the oil and gas industry is leading to increased competition for the same pool of workers among firms involved in conventional and non-conventional oil, and natural gas extraction.

- **Oil Sands.** The Athabasca Oil Sands in northern Alberta has seen tremendous growth in recent years. In 2002, Alberta's oil sands production overtook that of conventional crude. It is estimated the oil sands will account for three-quarters of Alberta's total oil production by 2008.[15] Further expansion is planned with billions of dollars being invested in developing this resource. As of April 2007, the oil sands (including upgraders) accounted for over $105 billion or 61 per cent of all major construction projects planned, underway or recently completed in the province.[16]

  The use of mining[17] and drilling (i.e. in-situ)[18] techniques in the extraction process means that the oil sands industry is in direct competition with other energy sub-sectors for the same pool of workers.

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[9] *Inventory of Major Alberta Projects,* Alberta Employment, Immigration and Industry, April 2007
[10] *Government of Alberta 2005-06 Annual Report,* Alberta Finance, June 2006
[11] *Alberta: Issues and Initiatives,* Canadian Association of Petroleum Producers, 2006
[12] Petroleum Services Association of Canada, 2007
[13] Tight gas refers to low-grade gas deposits held in impermeable formations. *The Decade Ahead,* Petroleum Human Resources Council of Canada, 2003
[14] Deep gas refers to gas in "deep" reservoirs, typically more than 15,000 feet below the surface. *Ibid*
[15] *Alberta's Long-range Outlook: "Oil's Well",* Special Report, Bank of Montreal, January 2006
[16] *Inventory of Major Alberta Projects,* Alberta Employment, Immigration and Industry, April 2007
[17] Mining operations involve shovel and truck mining methods and account for roughly 60 per cent of bitumen produced in 2005. For more information refer to *Oil Sands Industry Update,* Alberta Human Resources and Employment, December 2006.
[18] *In-situ* involves the removal of bitumen from the sand while the oil sands deposit is still in place underground. It accounts for roughly 40 per cent of bitumen produced in 2005. *Ibid*

- **Coal.** Although not nearly as large in terms of investment or employment as oil and gas, coal has been, and continues to be, an important part of Alberta's energy sector. There are 11 major coal mines that operate in Alberta typically producing approximately 30 million tonnes of marketable coal annually. In 2006, 50 per cent of the coal mined in Canada was from Alberta.[19]

- **Electricity.** Alberta's restructured electricity market has attracted private investment in new generation, leading to over 4,000 megawatts being added to Alberta's electricity generating capacity since 1998.[20,21]

  Alberta relies primarily on thermal sources such as coal (50 per cent) and natural gas (38 per cent) for its generating capacity. The rest is comprised of hydro, wind, biomass and fuel oil. Increased wind power generation is planned in southern Alberta in the coming years.[22]

  While Alberta's generation capacity has increased significantly in recent years, there has not been a major transmission upgrade in 20 years. A comprehensive long-range 10-year transmission plan has recently been prepared which identifies upgrades required to keep pace with the province's growth.

- **Pipelines.** As production from Alberta's oil sands grows, pipelines will be integral in exporting bitumen to new markets in the United States and Asia. New natural gas pipeline routes are also being proposed from Alaska and the Northwest Territories. These projects will place increasing demands on the labour market, competing with other construction projects in western and northern Canada for both skilled and unskilled labour. The Mackenzie Gas Project, for example, is expected to require 5,000 workers over a four-year construction period.[23]

Employment

The total number of Albertans employed in the energy sector, as defined for the purposes of this strategy, was estimated at 146,000 in 2006.[24] Approximately 132,000 individuals worked in oil and gas extraction, and support activities. A further 10,000 were estimated to be employed in Alberta's electricity industry, and 2,000 each in the coal and pipeline industries. In 2006, the unemployment rate for mining, oil and gas extraction was three per cent, well below the provincial average of 3.4 per cent.[25] As mentioned previously, the energy sector also supports a great deal of indirect employment in sectors such as manufacturing, industrial construction and transportation.

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[19] *Cansim Table 303-0016*, Statistics Canada, February 2007
[20] *Electricity Statistics*, Alberta Energy, 2006
[21] One megawatt is roughly equivalent to the power consumed by 1,000 typical Alberta households in an average year. *Electricity Statistics*, Alberta Energy, 2006
[22] *Utilities Industry*, Alberta Human Resources and Employment, March 2006
[23] *Pipeline Construction*, Mackenzie Gas Project, 2006
[24] *Labour Force Survey*, Statistics Canada, 2006
[25] *Ibid*

Parts of the energy sector are experiencing demographic challenges. Economic downturns in the 1980s and early 1990s led to downsizing and the current demographic gaps in the workforce are due to the loss of experienced mid-career employees and difficulty in attracting new entrants.[26]

As well, a number of occupations in the oil and gas, and electricity industries are experiencing the challenges of an aging workforce. Forty per cent of the labour force in oil and gas supervisory, engineering, technology and operations-related positions are 45 years and older.[27]

The energy sector also employs proportionally more men than women. Men represent almost 75 per cent of the total workforce in mining, oil and gas extraction while they only account for 55 per cent of all employed Albertans.[28] However, the numbers of women in mining, oil and gas extraction are steadily increasing, up 9,600 between 2005 and 2006.

Occupations in the sector are wide-ranging with varying education and skill requirements. While there are some positions that do not require high skill levels, many occupations including engineers and geoscientists require a four-year bachelor degree or higher. Several technologist positions including geophysical, petroleum engineering and industrial engineering technologists require a two-year technology diploma. Many occupations are also in designated trades requiring the completion of apprenticeship training.

As shown in Table 1, average hourly earnings for workers in individual energy sub-sectors are substantially higher than the provincial average. Depending on the occupation, many workers in the energy sector earn salaries well above the averages listed here.

Table 1 2005 Average Hourly Earnings

Sub-Sector	Average Hourly Earnings[29]	% Above Provincial Average[30]
Oil and Gas Extraction	$27.67	40%
Coal	$26.27	33%
Electricity	$28.47	44%
Pipelines	$27.02	37%

[26] *Strategic Human Resources Study of the Upstream Petroleum Industry: The Decade Ahead*, Petroleum Human Resources Council of Canada, 2003

[27] *Ibid*

[28] *Labour Force Survey*, Statistics Canada, 2006

[29] Information is collected on the usual wages or salary of employees at their primary job. Respondents are asked to report their wage/salary before taxes and other deductions including tips, commissions and bonuses. Weekly and hourly wages/ salary are calculated in conjunction with usual paid work hours per week. *Cansim, Labour Force Survey*, Statistics Canada, 2005

[30] Average hourly earnings for all industries in Alberta was $19.76 in 2005. *Ibid*

OUTLOOK

Many observers agree that the global energy market has moved into an environment of higher prices.[31] As a result, forecasts are predicting strong growth for Alberta's energy sector. The mining, oil and gas extraction industry is expected to grow on average 2.5 per cent annually to 2010 and generate 8.7 per cent of all new jobs in Alberta between 2005 and 2010.[32] The rate of employment growth will vary, however, among different segments of the sector.

The level of drilling activity in the oil and gas industry is expected to remain relatively high over the medium term. This prediction is in response to strong current and anticipated demand for oil and gas resources and reflects the industry's attempts to replace existing conventional production. Drilling and service companies have experienced worker shortages for several years due in part to the loss of their traditional labour pool and lack of public knowledge of drilling and service occupations.[33] In the future, strong demand for labour coupled with anticipated rates of retirement are expected to lead to continuing labour shortages in occupations such as engineering, technology and operations-related positions.[34]

In the oil sands sector, production is expected to nearly double from 2004 levels by 2010,[35] and then nearly triple to approximately 2.7 million barrels by 2015.[36] This will lead to a significant increase in employment for heavy equipment operators, process operators, heavy duty mechanics and power engineers.

As more technological improvements are researched, developed and applied to increase both conventional and non-conventional resource recovery, highly skilled workers such as engineers, geoscientists, technicians and environmental specialists will be in high demand.

Significant industrial construction related to the energy sector is planned in the foreseeable future. Of the $121.3 billion in energy-related industrial construction projects, $83.8 billion has yet to begin as of May 1, 2007. The immense size and nature of many energy-related industrial construction projects highlights the importance of project management and supervisory skills to contain costs and achieve project objectives.

A high pace of growth is anticipated in the energy sector over the next decade. Cooperation between government, industry sectors and labour groups is required to address and support this growth. There must be a focus on addressing short-term labour force challenges, as well as, laying the foundation for addressing issues over the long term.

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[31] *Mining and Oil and Gas Extraction Industry,* Alberta Human Resources and Employment, March 2006
[32] *Ibid*
[33] Petroleum Services Association of Canada, 2007
[34] *The Decade Ahead,* Petroleum Human Resources Council of Canada, 2003
[35] *Budget 2007,* Government of Alberta
[36] *The Canadian Oil Sands: Opportunities and Challenges (Presentation),* Canadian Association of Petroleum Producers, February 2006

CHALLENGES AND ISSUES

The energy sector faces a number of significant short and long-term labour force challenges, including:

- **Demand for energy sector workers outside Alberta.** Alberta's energy sector competes for and attracts workers from across the country, and sometimes from around the world. Increased energy sector activity outside Alberta has the potential to pull workers away from Alberta or limit the ability of companies to attract workers to the province. Increased drilling activity in British Columbia, increased investment activity in northern Canada, and the potential for increased offshore drilling activity in Atlantic Canada could make it more difficult to attract workers from other parts of the country.

- **Interdependency with other sectors.** Given the high degree of interdependence between sectors, labour force challenges faced by the manufacturing, industrial construction and transportation industries can significantly impact growth in the energy sector.

- **Increasing competition for workers in the province.** Alberta's rapid economic growth is placing increasing demands on our province's labour force. Alberta's unemployment rate averaged 3.4 per cent in 2006, the lowest rate in the country.[37]

  In this tight labour market, competition for labour is strong both within the energy sector and between sectors. The energy sector draws upon workers of all skill levels. Highly skilled workers (i.e. engineers, supervisors), skilled trades people and unskilled labour are needed by the energy sector to construct the large industrial projects planned over the next decade. The shortage of workers is leading some energy companies to place less experienced workers into some positions. For example, a position that used to require 10 years experience may now only require five or less.

- **Aging workforce.** The energy sector is one of many sectors affected over the long term by Alberta's aging workforce. This could potentially lead to shortages in technology and operations-related occupations, as well as supervisory positions.[38] As older workers retire, the sector will lose not only workers, but also years of experience and training that can not be easily replaced.

- **Increased worker mobility.** Coupled with increasing competition is increasing worker mobility among sectors. Many trades persons (i.e. welders and electricians) as well as other highly skilled workers (i.e. engineers) have skills which can be easily utilized in a variety of settings, allowing them to move back and forth between sectors.

[37] *Labour Force Survey Release*, Statistics Canada, January 2007
[38] *The Decade Ahead*, Petroleum Human Resources Council of Canada, 2003

- **Increasing skill requirements.** Technological improvements are expected to play a significant role in the energy sector, changing the nature of work for many occupations. More and higher level skills will be needed, and requirements for workers to have multi-disciplinary and cross-functional skills will increase. In addition, energy sector employers are concerned that skills taught in the secondary and post-secondary education system are not always consistent with those required in the workplace.

- **Increasing wages.** In response to the increased competition for labour, wages in the energy sector have been increasing and are well above the provincial average. There are concerns that higher wages in the energy sector are drawing workers away from other industries, such as forestry and manufacturing. Also, some young people may enter the workforce before completing high school or pursuing post-secondary studies. At the same time, concerns have also been expressed that the comparatively higher wages in parts of the energy sector, for example the oil sands sub-sector, are enticing workers away from jobs in other parts of the sector.

  In remote communities, higher wages appear to be drawing workers away from virtually all other sectors, including the service industry (i.e. retail, restaurant and food services). This has a negative impact not only on these sectors, but on the quality of life in the community making it increasingly difficult to attract workers to these communities.

- **Addressing socio-economic issues.** The cost of living and quality of life in Alberta impacts the energy sector's ability to attract and retain its needed workforce. A coordinated approach is needed to address socio-economic issues, such as housing, traffic, social services, and municipal and provincial infrastructure and services. If these needs are not met, Alberta will fail to attract new workers and potentially lose workers who are already here.

  Addressing these issues is particularly important in parts of northern Alberta where a number of new construction and operations positions are being created. Some of these "hard-to-recruit" locations are far from major centres and may lack a certain level of amenities (i.e. education, medical and retail facilities, and housing), spousal employment opportunities, and/or have a higher cost of living.[39]

- **Cost escalation.** The limited supply of labour and rising costs for materials and equipment are leading to significant cost escalations for a number of industrial construction projects, particularly in the oil sands sector. Some energy company representatives indicate that costs are increasing by as much as 30 to 50 per cent. With such cost escalation, future projects may face delays or even cancellation.[40]

- **Workforce diversity.** Diversity refers to those characteristics that make individual workers different from one another such as race, gender, ethnicity, or having a disability. This is an important issue for energy sector employers because lifestyle, location, education/training requirements and work culture can be barriers to the attraction of workers from under-represented groups such as women and immigrants.

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[39] *Increasing the Talent for the Petroleum Industry in Hard-To-Recruit Locations.* Petroleum Human Resources Council of Canada, March 2006

[40] Some examples of cost overruns on large-scale energy projects can be found in *Oil Sands Industry Update.* Alberta Human Resources and Employment, December 2006

Currently, the energy sector is attempting to make increased use of immigration and the Temporary Foreign Worker program to address some labour force pressures. As much of the work in the energy sector is occurring in rural locations and sometimes in close proximity to Aboriginal communities, opportunities also exist to recruit more Aboriginal workers. More attention is needed to engage workers of varying cultures, abilities and genders in the energy sector.

- **Public perception of the stability of the sector.** Previous downturns in Alberta's energy sector (i.e. 1980s) led to significant downsizing and the loss of experienced employees. This restructuring has contributed to lingering apprehensions about opportunities for long-term career stability in the sector.[41]

- **Difficult working conditions.** The nature of the jobs in this sector is physically demanding, seasonal and often requires shift work with long hours. It can be difficult to recruit and retain workers in these conditions, particularly younger workers who are placing increased emphasis on work-life balance.

- **Workplace health and safety.** Workplace health and safety is an important issue on Alberta's worksites. Although improvements for heavy industrial construction safety are already in place, opportunities still exist for industry and government to work together to improve the health and safety of work environments in the energy sector.

- **Drugs and alcohol.** Drug and alcohol related issues continue to be a challenge on worksites in the energy sector. Industry will need to continue developing policies designed to eliminate drug and alcohol related safety incidents from their worksites and assist employees in obtaining treatment and support for addictions.

- **Absenteeism and Turnover.** Absenteeism and turnover rates are a major problem on a number of large industrial construction worksites, leading to increased costs and decreased productivity. Many employers are currently overstaffing projects to avoid delays due to absenteeism and turnover.

- **Availability of labour market information.** There is a lack of consistency in quality and quantity of labour market supply and demand information among the various energy sub-sectors. Information sharing will play a vital role to support planning to address labour force pressures in Alberta's energy sector.

[41] *The Decade Ahead,* Petroleum Human Resources Council of Canada, 2003

INDUSTRY PRIORITY ACTIONS

The energy sector is already actively engaged in addressing the issue of skilled labour in Alberta through the industry associations identified in this report, under the guidance of their board of directors and in the best interests of their member companies. The workforce strategy actions are presented in a format consistent with the Government of Alberta's labour force strategy, *Building and Educating Tomorrow's Workforce.*

The actions listed below provide a snapshot of some of the ongoing activities completed or currently underway by the respective industry associations, as well as a framework for addressing other key labour force challenges and pressures facing the energy sector. This list of actions assumes energy sector investments and expansions will proceed at or above current levels already planned for the foreseeable future.

The contributing organizations that anticipate undertaking activities in support of specific priority actions include:

Alberta Building Trades Council of Unions (ABTC)

Alberta Chamber of Resources (ACR)

Alberta Construction Association (ACA)

Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)

Canadian Association of Petroleum Producers (CAPP)

Canadian Centre for Energy Information (Centre for Energy)

Careers – The Next Generation

Christian Labour Association of Canada (CLAC)

Construction Owners Association of Alberta (COAA)

Construction Sector Council of Canada (CSC)

Electricity Sector Council (ESC)

Enform Canada (Enform)

International Brotherhood of Electrical Workers (IBEW)

Merit Contractors Association (Merit)

Petroleum Human Resources Council of Canada (Petroleum HR Council)

Petroleum Service Association of Canada (PSAC)

Regional Issues Working Group (RIWG) Athabasca and Fort McMurray

Responsible Of the Safety for Everyone (ROSE) Committee

INFORM

Information sharing will play a vital role in addressing labour force pressures in Alberta's energy sector. The Inform theme focuses on increased access to information to support informed decision-making on the part of employers, workers, youth entering the workforce and individuals considering employment in this sector.

1.1 Develop a labour market demand and supply forecast model for the oil and gas industry (other than the oil sands).

CAPP, Petroleum HR Council

1.2 Operate a labour market demand and supply forecasting model for the industrial construction industry on a provincial level which feeds into the national forecast developed in conjunction with the Construction Sector Council.

COAA, CSC

1.3 Develop a labour market demand and supply forecast model for the electricity and renewable energy industry.

ESC

1.4 Work with owners, contractor associations, contractors, labour provider associations and labour providers to coordinate scheduled shut-downs thereby resulting in reduced labour requirements and greater manpower leveling during peak demand periods.

ROSE Committee[42]

1.5 Coordinate the development of labour demand and supply forecasts.

CAPP, CSC, ESC
Petroleum HR Council, ROSE Committee

1.6 Promote increased development and use of current and new labour force planning tools and models.

Centre for Energy, CSC, ESC, Petroleum HR Council

1.7 Educate CAPP members about current labour market issues and challenges (i.e. apprenticeship issues, labour mobility, etc.).

CAPP

[42] The ROSE Committee is an association of industrial operators in Alberta's industrial heartland. The committee meets several times a year to discuss and share information primarily regarding safety issues. More recently, the committee has also begun to discuss turn-around issues, including sharing turn-around schedules and manpower requirements in an effort to avoid high peak periods of labour demand and to reduce risk of injury by overusing the workforce.

1.8 Disseminate the "Let's Get to Work" document which outlines strategies/actions required to address skilled trade shortages.

Merit

1.9 Develop and distribute a best practices inventory of what has worked well for resource industry companies partnering with Aboriginal communities.

ACR, CSC

1.10 Provide information on construction career opportunities (i.e. Trade Up initiative).

ACA, CSC

1.11 Develop information on career opportunities and occupations in the upstream petroleum industry and disseminate to traditional and non-traditional pools of labour (i.e. career information package on website).

Petroleum HR Council

1.12 Continue to promote careers in the trades (i.e. develop brochures, attend career fairs).

ABTC, CSC

1.13 Explore alternative approaches to altering public perception of the oil and gas industry.

CAPP

1.14 Develop productivity benchmarking and measurement for heavy industrial construction projects in excess of $100 million.

COAA

1.15 Analyze issues related to worker mobility for large industrial construction projects.

COAA, CSC

1.16 Work to identify and resolve issues related to oil sands development in the region around Fort McMurray.

RIWG Athabasca

1.17 Provide association members with information on how to access non-traditional pools of labour.

PSAC

ATTRACT

This theme relates to attracting workers from outside Alberta and Canada to meet some of the demand for labour in Alberta's energy sector.

2.1 Develop a "super-domain" with information on living in Alberta and working in the energy sector (i.e. a one-stop shop).

CAPP, Enform, Petroleum HR Council, PSAC

2.2 Partner with government and individual communities to provide improved support programs and networks for integrating new immigrants (i.e. British Columbia's pilot Immigrant Skilled Trades Employment Program).

CSC

2.3 Educate association members on the immigration process and related government policies.

CAPP, CSC, PSAC

2.4 Partner with the Canadian Council of Directors of Apprenticeship to develop a strategy to improve the Foreign Credential Recognition (FCR) process, including the development of an FCR assessment tool for foreign trained construction trade workers.

CSC

2.5 Work to improve labour mobility within Canada, particularly for occupations in the trades (i.e. recognition of credentials, free movement of apprentices, etc.).

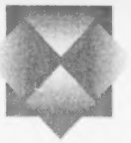
CAPP

2.6 Address workforce attraction issues for the petroleum industry with particular attention to hard-to-recruit locations.

Petroleum HR Council

2.7 In partnership with the Alberta Working Group of the ESC, continue to promote careers in the electricity and renewable energy industries.

ESC



DEVELOP A HIGH PERFORMANCE WORKFORCE

The Develop theme has two components. The first focuses on building Alberta's energy sector workforce through education and training.

3.1 Continue to provide training, including supervisory training, in the building trades. Almost all the building trades have training facilities and provide a significant amount of training in the province.

ABTC, CLAC, Merit

3.2 Operate a mobile training facility to offer training to journeymen and apprentice electrical workers in remote locations across the province.

IBEW

3.3 Support increased completion rates for apprentices (i.e. offer on-site schooling/training for apprentices).

ABTC, Individual employers

3.4 Develop best practices in the construction industry to encourage increased hiring and training of apprentices, especially women.

COAA

3.5 Develop occupational standards for upstream petroleum industry occupations to enhance safety, career development and industry training.

Enform, Petroleum HR Council, PSAC

3.6 Develop occupational standards for electricity and renewable energy occupations to enhance safety, career development and industry training.

ESC

3.7 Work with the Government of Alberta to ensure training is available for occupations in high demand (i.e. review training capacity at institutions, conduct supply/demand analysis related to engineering professions).

APEGGA, CAPP, CSC

3.8 Make effective use of the Aboriginal Skills and Employment Partnership Program.

ABTC, Individual employers

3.9 Provide Alberta youth with information and workplace internships in trades and technology career paths.

Careers – The Next Generation

DEVELOP A HIGH PERFORMANCE WORK ENVIRONMENT

The second component of the Develop theme relates to developing high performance work environments in Alberta's energy sector. This includes improving workplaces and work arrangements, increasing capital investment and technology adoption, and improving business processes.

3.10 Encourage the development of energy sector specific strategies for improving productivity through such means as technology commercialization and adoption, improved administrative processes and services, improved project management and supply chain development.

All companies, PSAC

3.11 Address issues related to productivity in the construction industry.

COAA, CSC

RETAIN

The Retain theme relates to enhancing the attractiveness of working in Alberta's energy sector so that workers – including mature workers, immigrants, Aboriginals and those who may experience difficulty maintaining employment – remain engaged in the industry.

4.1 Work to address workforce retention issues in the petroleum industry with particular attention to hard-to-recruit locations.

Petroleum HR Council

4.2 Continue to work with government and individual communities to develop programs and services to build inviting communities (i.e. affordable housing, child care, municipal amenities, arts, sports and recreation).

All associations and companies, RIWG Fort McMurray

4.3 Work with association members and different levels of government to support the creation of a welcoming environment (workplace and community) for new immigrants.

CAPP, Petroleum HR Council

4.4 Work with employers to increase awareness, understanding and appreciation of human rights, multiculturalism and diversity in the workplace.

All associations, companies and labour groups

4.5 Work with employers to increase awareness, understanding and appreciation of succession planning at all operational levels.

ESC

4.6 Address workplace diversity issues through the Respect in the Workplace committee.

COAA

4.7 Continue to build upon the success of existing workplace health and safety programs and implement further approaches to reduce work related injury and disease.

All associations, companies and labour groups

4.8 Continue to develop policies designed to eliminate drug and alcohol related safety incidents on worksites, and assist employees in obtaining treatment and support for addiction concerns.

All associations, companies and labour groups

4.9 Analyze issues and develop solutions related to absenteeism and employee turnover on industrial construction sites.

COAA

4.10 Encourage the adoption of innovative human resource practices that encourage young workers with the requisite skills to remain engaged in Alberta's energy sector.

All associations, companies and labour groups

4.11 Review incentives/disincentives to encourage mature workers to remain engaged in Alberta's energy sector.

All associations, companies and labour groups

MOVING FORWARD

A Workforce Strategy for Alberta's Energy Sector is a means to frame discussion, provide direction for action, coordinate activities and avoid duplication of efforts in the sector. It includes new initiatives as well as actions that complement and enhance existing projects and actions already underway. Industry will lead the implementation of the workforce strategy. Some challenges may include:

- avoiding fragmentation and duplication of implementation activities within the sector and across sectors;
- collaborating with stakeholders in other industry sectors on cross-sector initiatives, and
- keeping the momentum going on the implementation of workforce strategy actions over the next decade.

Workforce strategy actions will need to balance responding to the immediate labour force needs of the energy sector while addressing long-term issues. Employers and associations within the energy sector are committed to continued collaborative efforts with government to measure progress and to ensure these actions continue to address the energy sector's changing circumstances.

Industry and government will work together to monitor the success of this workforce strategy over the next 10 years. The Government of Alberta will support the energy industry in implementation of its workforce strategy by identifying opportunities for collaboration within and across industry sectors. By working together, industry and government can continue to build a strong and prosperous Alberta where all industries will benefit.

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